

GIS and 9-1-1: Today and Tomorrow

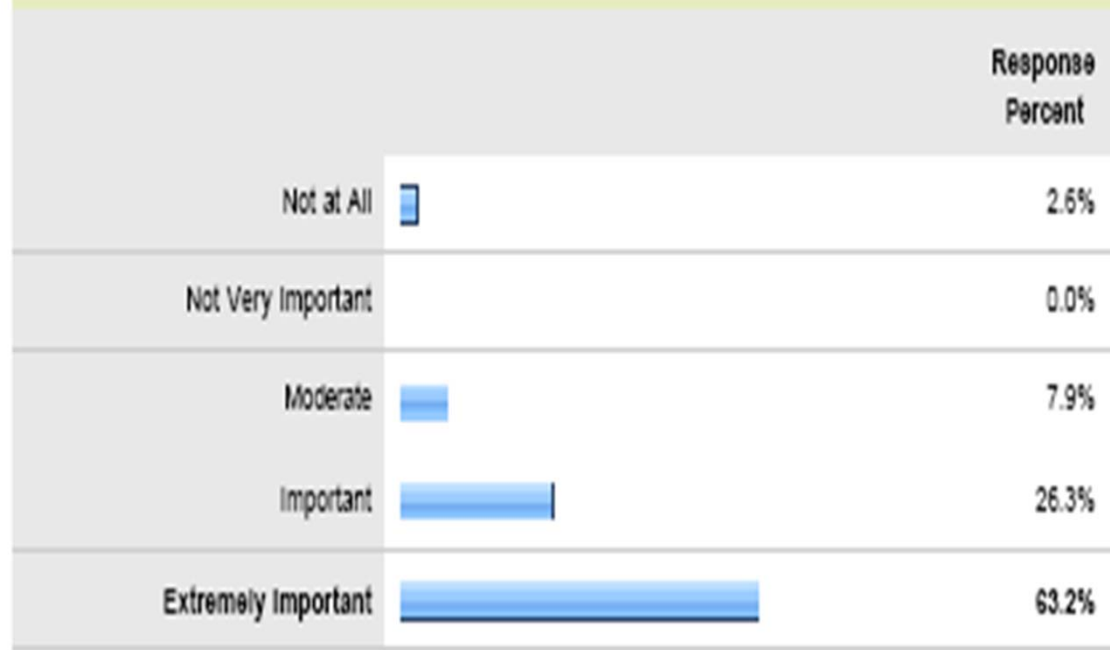
March 17, 2011

Agenda

- Perspectives about GIS and 9-1-1
- Overview of GIS and 9-1-1 today
- Overview of GIS and NG9-1-1
- GIS Project Tasks Overview
- Open Discussion

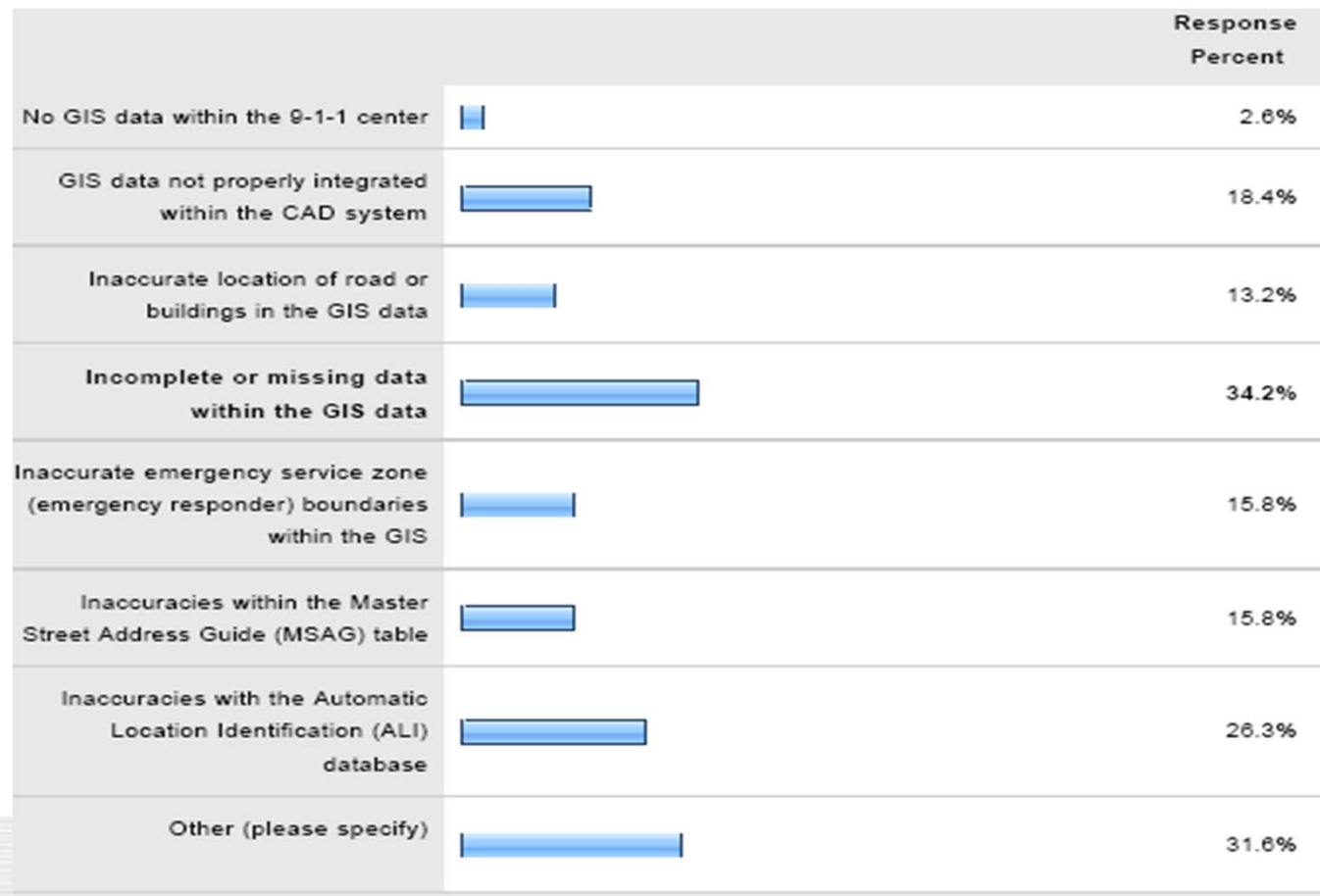
GIS Survey

9. In general, how Important is GIS data within your operations










GIS Survey

- Within the past 12 months, have you experienced delays in response or misrouted response because of any of the following related to GIS or other databases?



GIS Survey

11. Of the following potential issues with GIS data, which concerns you the most?

		Response Percent
Inaccuracies within your GIS data		31.6%
Lack of regular GIS data maintenance		18.4%
Lack of data standardization		10.5%
No address structure point layer		2.6%
GIS data not synchronized with MSAG and ALI		10.5%
Lack of GIS staff resources		13.2%
Other (please specify)		13.2%

Michigan Statewide GIS Business Plan

Outreach to Community

- Contacted 37 professional organizations to invite participation
- Hosted 5 Listening Sessions
- Conducted On-Line Survey
- Meeting Summaries Distributed for Comments
- Outreach Summary Posted for Public Comment
- Business Plan Draft Posted for Public Comment

Michigan Statewide GIS Business Plan

Outreach to Community

- ◆ 191 Attended a Listening Session
- ◆ 282 Submitted an On-Line Survey
- ◆ 11 Individuals Submitted Comments on the Business Plan Draft
 - 98 individual comments
 - 45 Changes were made to the draft based on these comments

Michigan Statewide GIS Business Plan

Outreach to Community

- ◆ Develop Programs to Support Statewide:
 - Ortho Imagery
 - Parcels
 - Address Points

Michigan Statewide GIS Business Plan

Business Drivers by Identified Importance

Business Drivers	Low Importance (1 or 2)	Medium Importance (3)	High Importance (4 or 5)
Improvement in data quality and consistency	3.98%	8.41%	87.61%
Infrastructure improvement and maintenance	17.65%	16.74%	65.61%
Improved land use planning and decision making	16.29%	19.00%	64.71%
Emergency preparedness and response	24.31%	16.97%	58.72%
Enhance/increase inter-organizational partnerships	16.13%	28.11%	55.76%
Environmental protection/Natural Resource Enhancement	21.92%	26.94%	51.14%
Reduction in labor or operational costs	29.28%	26.13%	44.59%
Economic/business development and improvement	30.88%	26.73%	42.40%
Enhancement of quality of life for citizens	27.75%	33.49%	38.76%
Enhancement of health for citizens	44.76%	23.33%	31.90%
Explore new sources for revenue generation	49.77%	21.20%	29.03%
Support quality and availability of educational and training opportunities	47.62%	28.57%	23.81%

GIS in today's 9-1-1

Automatic Location Identification (ALI) Database

814-555-7777

814-555-7777

John Doe

111 Maple Ln

Anytown, USA

ESN 123

Fire: Station 1

Police: PD 1

EMS: EMS 4

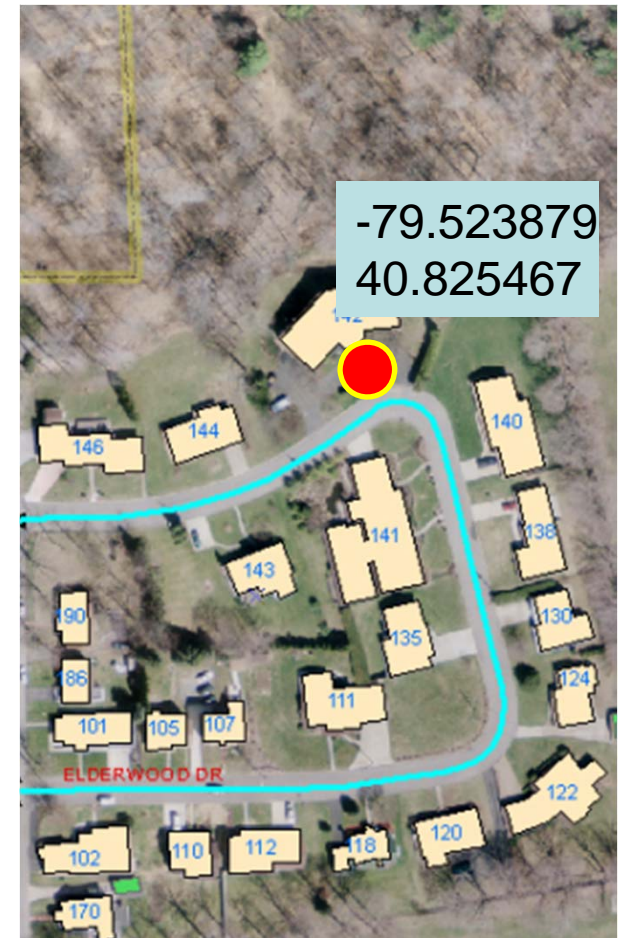
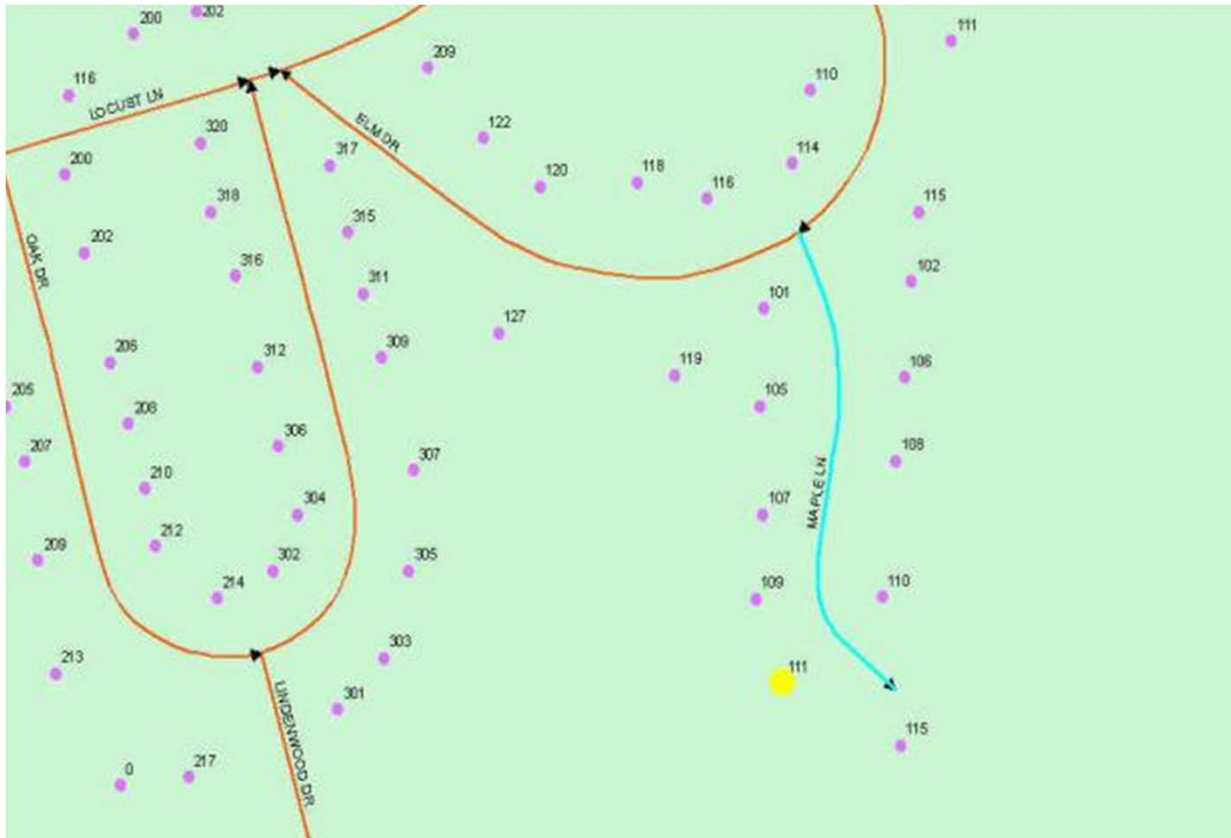
ESN 123

PHONE	HOUSENO	HOUSESUF	STREET	COMMUNITY	STATE	ESN	CUSTOMER
814-555-7474	400		9TH ST	ANYTOWN	PA	123	J SMITH
814-555-7777	111		MAPLE LN	ANYTOWN	PA	123	JOHN DOE
814-555-1234	811		11TH ST	ANYTOWN	PA	123	LARRY GREENE
814-555-2345	801		TERRACE BLVD	ANYTOWN	PA	234	MIKE JONES
814-555-1277	432		WARREN AVE	ANYTOWN	PA	456	ACME IND
814-555-7643	716		ARMSTRONG PL	ANYTOWN	PA	123	FACTORY 2
814-555-9876	123		WARREN AVE	ANYTOWN	PA	123	JAMES WOOD
814-555-8532	510		7TH ST	ANYTOWN	PA	123	PHIL BLACK
814-555-8712	706		OAKHILL LN	ANYTOWN	PA	123	BUD SMITH
814-555-5678	521		WOODWARD AVE	ANYTOWN	PA	765	JOE COFFEE
814-555-567	456		WOODWARD AVE	ANYTOWN	PA	765	JANE DOE

Master Street Address Guide (MSAG)

PRE	STREETNAME	STRE	POST	LOW	HIGH	SIDE	COMMUNITY	STATE	ESN
N	6TH	ST		376	398	B	ANYTOWN	PA	020
	MAPLE	LN		100	156	B	ANYTOWN	PA	123
N	WARREN	AVE		700	798	B	ANYTOWN	PA	020
	WOODWARD	AVE		1100	1198	B	ANYTOWN	PA	020
N	6TH	ST		614	698	B	ANYTOWN	PA	020
	HOSE HOUSE	ALY		401	499	B	ANYTOWN	PA	020
	HOSE HOUSE	ALY		301	399	B	ANYTOWN	PA	020
	HOSE HOUSE	ALY		299	299	B	ANYTOWN	PA	020
N	5TH	ST		700	706	B	ANYTOWN	PA	020
N	5TH	ST		628	698	B	ANYTOWN	PA	020
N	5TH	ST		600	626	E	ANYTOWN	PA	020

GIS in today's 9-1-1

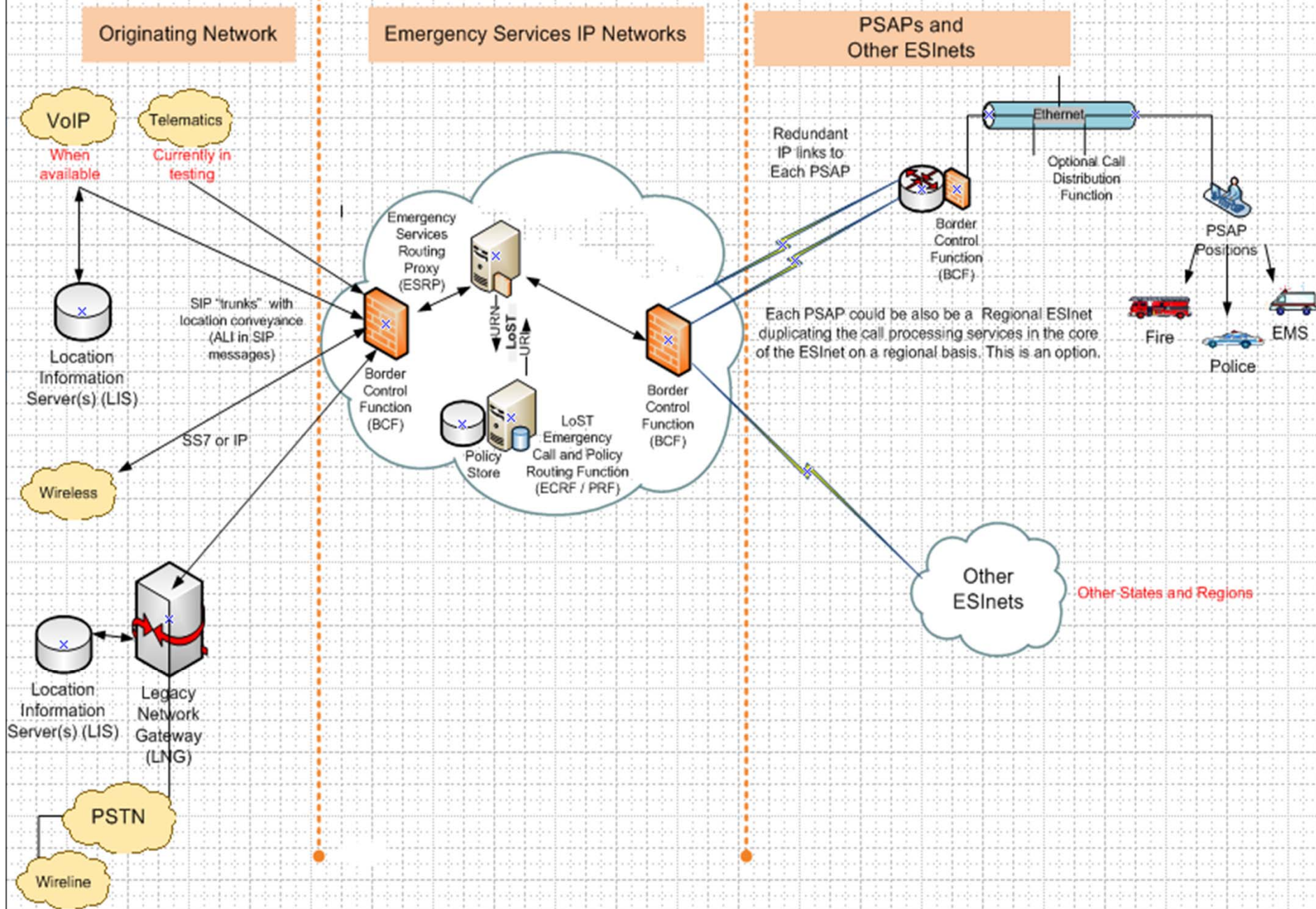


GIS in NG9-1-1

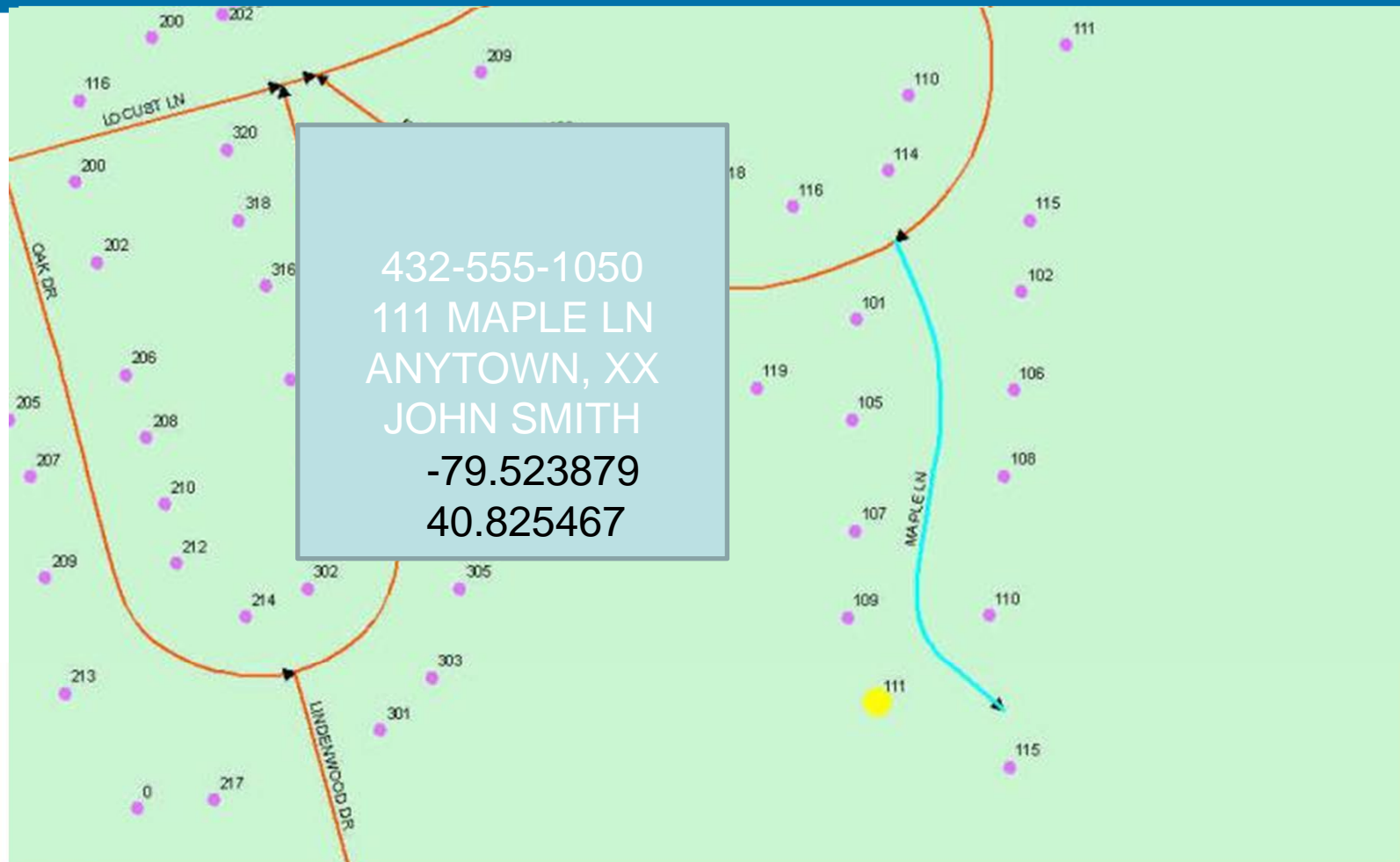
- ◆ GIS plays crucial role in NG9-1-1 call routing - ECRF
- ◆ Routing database is GIS data centric
- ◆ Accuracy of GIS data is paramount
- ◆ Shared data – coordination
- ◆ 9-1-1 authority is responsible for the data
- ◆ Location is delivered with call
- ◆ Location is pre-validated using GIS data - LVF

Full NG-9-1-1

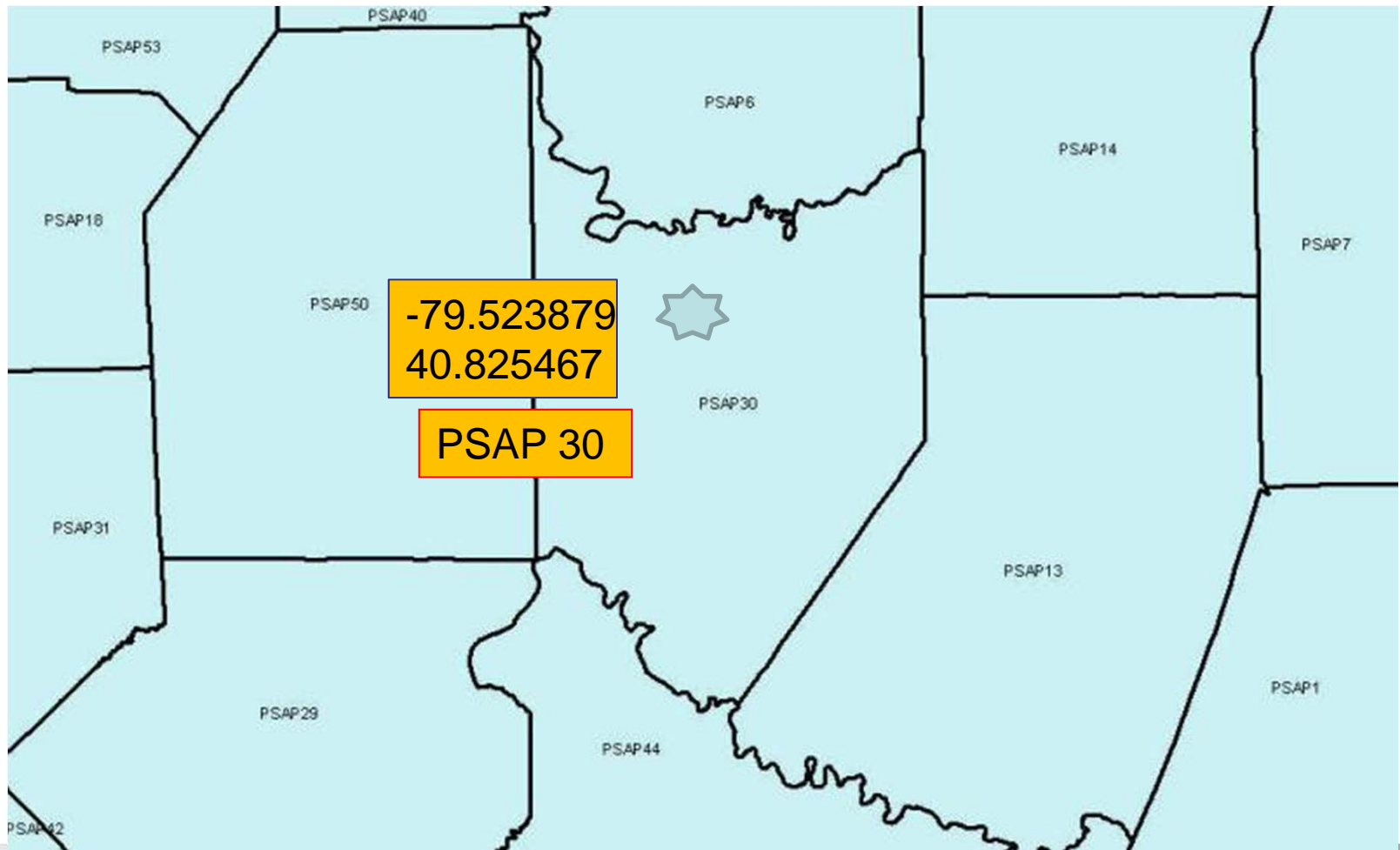
Conceptual Only



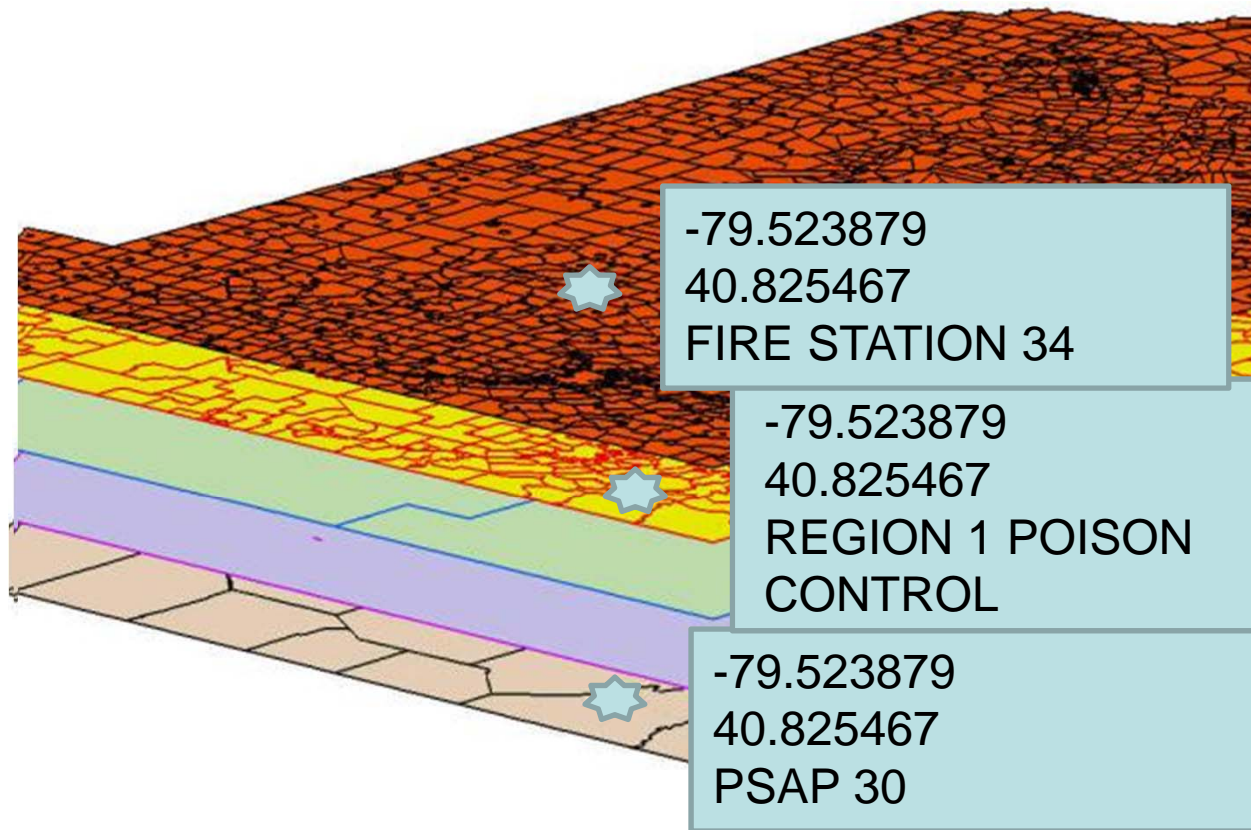
Call Routing

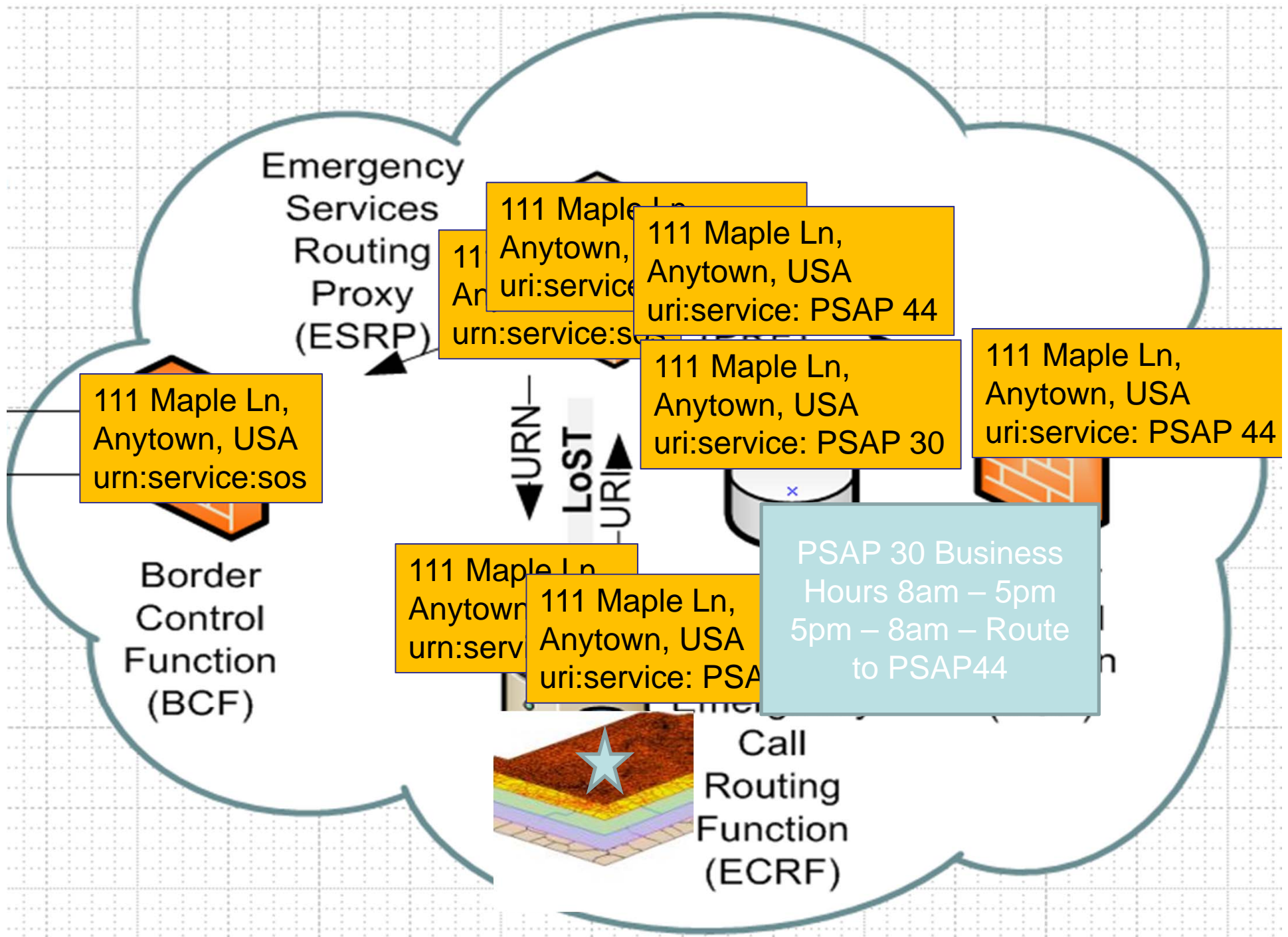


Call Routing

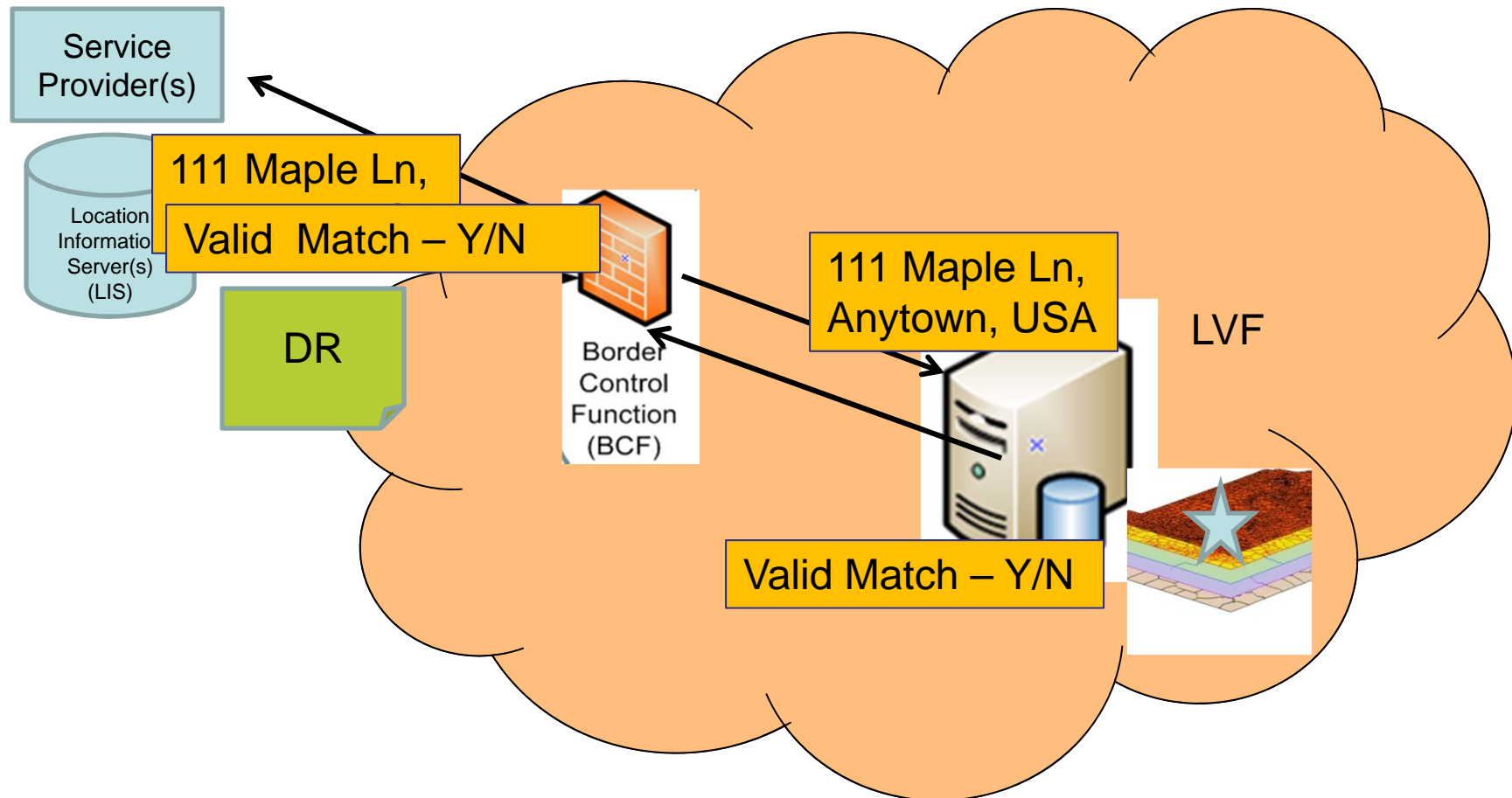


Point in Polygon Location Query





Location Validation Function (LVF)



Project Tasks Overview

- ◆ Initial Assessment and Data Development Plan
- ◆ Community Outreach
- ◆ Statewide 9-1-1 Database Design
- ◆ Develop and Implement Database and Application Architecture
- ◆ Develop Statewide PSAP Boundary Layer
- ◆ Develop Complete Statewide GIS Road Centerline and an Initial Point Address Layers
- ◆ Maintenance Plan and Workflows Implementation

Questions

Open Discussion